REMARKS

As a preliminary, Applicant and Applicant's representative thank the Examiner for the interview of July 11, 2007.

By the present amendment, the sheet of drawings with Fig. 2 has been replaced by a replacement sheet of drawings with amended Fig. 2 showing legends in addition to reference numerals.

Specifically, the reference numerals 12-18 have replaced by the following legends:

- 12: detect engine idling state
- 13 acquire downstream temperature
- 14: determine maximum fuel quantity to be injected during post-injections
- 15: monitor fuel quantity injected during post-injections
- 16: total quantity = predetermined maximum quantity?
- 17: predetermined maximum quantity reached
- 18: reduce the or each post-injection progressively

Support for these legends is found in the description of each reference numeral in the specification, in particular from page 4, line 31 to page 5, line 13.

Claim 1 has been amended to recite:

- that the predetermined "maximum quantity" parameter is a "maximum quantity of fuel to be injected through post-injections during the period in which the engine is idling by implementation of the strategy of regeneration"
- that the "reduction means" is for "progressively reducing the or each post-injection as soon

as the total quantity of fuel that has been injected through post-injections since the start of the post-injections during this period reaches the predetermined maximum quantity"

Support for the added recitations is immediately derived from the specification. In particular, the recitation that the "predetermined maximum amount" is a "total quantity," i.e., a cap for post-injection volumes cumulated since the start of the post injections during a particular period of idling, is immediately derived from the description, for example, at page 5, lines 27-30 ("quantity of fuel that is allowed for post-injection during a period of idling is capped by a maximum quantity"), at page 6, lines 3-8 ("by limiting the total quantity of fuel that is post-injected during this period...."), and in the illustrative embodiment of the invention at page 5, lines 31-34 (supply which is emptied during the period of idling, then reinitialized at the end of the period).

New claims 8-10 have been added to recite that the catalyst-forming means comprises an oxidation catalyst, that the catalyst-forming means comprise a NOx trap with a CO/HC oxidation function, and that the period of idling includes a period in which the acceleration pedal is raised, respectively. Support for these recitations is found in the original application, for example, on page 1, lines 26-33.

Further, new method claims 11-20 corresponding to system claims 1-10 have been added, except that claim 11 also recites a step of monitoring the total quantity of fuel injected through post-injections since the start of the post-injections during this period and detecting a moment when the total quantity of injected fuel reaches the predetermined maximum quantity. Support for the additional recitation is found in the original application, in particular on page 5, lines 4-7.

It is submitted that this application is a U.S. national stage of an international application under 35 U.S.C. 371, and that the present claims 1-10 and 11-20 comply with unity of invention rules as defined in the PCT, i.e., claims 1 and 11 recite corresponding special technical features that define a contribution to the art.

Claims 1-20 are pending in the present application. Claims 1 and 11 are the only independent claim.

In the Office Action, Fig. 2 is objected to as insufficiently described.

Fig. 2 has been amended to complement the reference numerals 12-18 by corresponding legends from the specification. Accordingly, it is submitted that the objection should be withdrawn.

Next, in the Office Action, claims 1-7 are rejected under 35 U.S.C. 102(b) as anticipated by US 6,666,020 to Tonetti et al. ("Tonetti").

Reconsideration and withdrawal of the rejection is respectfully requested. The passage of Tonetti from col. 6, line 40 to col. 8, lines 65, to which reference is made in the Office Action, discloses controlling post-injection generally, i.e., controlling the volume of each post-injection. However, Tonetti is completely silent about controlling a parameter that corresponds to a cumulated amount of fuel to be post-injected during a period of time when the engine is idling. Tonetti is also completely silent about reducing progressively the volume of each post-injection once this cumulative maximum amount has been reached.

In particular, it is submitted that, in the present invention, the "maximum quantity of fuel to be injected during post-injections" is a predetermined amount which is set for the whole period

of idling. In other words, the present invention focuses on setting a global cap on the amount of fuel that can be post-injected by the engine under the regeneration strategy during a period of idling starts. Once this total cap is reached, the volume of each post-injection will be progressively reduced.

Thus, the maximum quantity as recited in the present invention is a predetermined value that will be reached once the successive volumes injected by each post-injection will have added up to this "maximum quantity." At that point, according to the invention, the post-injections will be reduced progressively.

The "predetermined maximum quantity" of the present invention is illustrated by the exemplary embodiment of a supply which is emptied progressively during the period of idling, then reinitialized at the end of the period (see description at page 5, lines 31-34). The supply corresponds to the "total quantity" allowed for post-injections under the regeneration strategy during a period of idling. As soon as post-injections start during that period, the supply is progressively emptied. Once the supply will be empty, the "maximum quantity" allowed for implementing the regeneration strategy will have been reached, and the system will progressively reduce the or each post-injection.

Thus, in the presently claimed invention, the parameter used to trigger the progressive reduction of the post-injections is a total amount since the start of post-injections during a period of idling. This is completely different from setting a maximum for the volume of each post-injection, which would be the variable controlled in Tonetti. As a result, Tonetti completely fails to teach or suggest a system according to present claim 1, and in particular means for

determining a maximum quantity of fuel to be injected through post-injections during the period in which the engine is idling by implementation of the strategy of regeneration, on the basis of said temperature; and reduction means for progressively reducing the or each post-injection as soon as the total quantity of fuel that has been injected through post-injections since the start of the post-injections during this period reaches the predetermined maximum quantity, as recited in present claim 1. Therefore, present claim 1, and the claims dependent directly or indirectly thereon, are not anticipated by, and not obvious over, Tonetti.

In addition, with respect to the dependent claims, it is submitted that Tonetti completely fails to teach or suggest the combined features of each of these respective claims. Therefore, each of the dependent claims is not anticipated by, and not obvious over, Tonetti.

Also, with respect to new claims 11-20, it is submitted that Tonetti fails to teach or suggest the features of claims 11-20 for the same reasons as discussed above.

In view of the above, it is submitted that the rejection should be withdrawn.

In conclusion, the invention as presently claimed is patentable. It is believed that the claims are in allowable condition and a notice to that effect is earnestly requested.

In the event there is, in the Examiner's opinion, any outstanding issue and such issue may be resolved by means of a telephone interview, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number listed below.

In the event this paper is not considered to be timely filed, the Applicants hereby petition for an appropriate extension of the response period. Please charge the fee for such extension and any other fees which may be required to our Deposit Account No. 502759.

Respectfully submitted,

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